

GenCore version 5.1.3
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OM protein - protein search, using sw model

Run on: December 30, 2002, 16:15:48 ; Search time 17 Seconds

(without alignments)
367.573 Million cell updates/sec

Title: US-09-664-326-23

Perfect score: 368
Sequence: 1 LTYVDCYTESGQNLCLCEGSN.....PKRSHNDGFEEIPEYLQ 65

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

1: PIR1:*
2: PIR2:*
3: PIR3:*
4: PIR4:*

Prod. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	360	97.8	65	1	HU1LXH
2	353	95.9	65	2	S05674
3	352	95.7	65	2	S78521
4	350	95.1	65	2	S05673
5	348	94.6	65	2	S05676
6	348	94.6	65	2	S05678
7	346	94.0	65	2	S78520
8	345	93.8	65	2	S05670
9	345	93.8	65	2	S05675
10	343	93.2	65	2	S05679
11	333	90.5	72	2	A37417
12	315	85.6	66	2	A24350
13	288	78.3	55	2	S05672
14	249	67.7	63	2	A53883
15	247	67.1	84	2	S33329
16	230	62.5	84	2	S33328
17	235	58.4	63	1	A42207
18	173	47.0	62	1	HU1LXH
19	90	24.5	17	2	S05671
20	74	20.1	2352	2	T30201
21	69	18.8	1766	2	A42125
22	68.5	18.6	1071	1	PXBVYA
23	68.5	18.6	2233	2	T28669
24	66	17.9	761	2	T09052
25	66	17.9	2150	2	T32497
26	66	17.9	5376	2	T42215
27	65	17.7	558	2	T15448
28	65	17.7	1043	2	T19734
29	65	17.7	1661	2	T31330

30	64	17.4	317	2	I46916	insulin-like growth
31	64	17.4	1743	2	T26859	hypothetical prote
32	63.5	17.3	318	2	A82319	glutathione synthe
33	63.5	17.3	474	2	S18452	variant surface gl
34	63.5	17.3	755	2	A44315	cartilage oligomer
35	63.5	17.3	1722	2	E89753	protein F11C7.4 [l
36	63.5	17.3	2321	2	S78549	notch3 protein - h
37	63.5	17.3	2703	1	A24420	notch protein - fr
38	63	17.1	80	2	T10183	antifungal protein
39	63	17.1	778	2	T05341	S-receptor kinase
40	62.5	17.0	513	1	J01486	activin receptor I
41	62.5	17.0	1820	2	A55494	latent transformin
42	62	16.8	79	2	T10243	antifungal protein
43	62	16.8	79	2	T07917	antifungal protein
44	62	16.8	80	2	T02621	probable antifunga
45	62	16.8	80	2	T02622	probable antifunga

ALIGNMENTS

RESULT 1

HU1LXH

thrombin inhibitor (hirudin) - medicinal leech

C/Species: Hirudo medicinalis (medicinal leech)

C/Date: 30-Nov-1980 #sequence_revision 03-Aug-1984 #text_change 07-May-1999

C/Accession: A91318; A94429; A60811; A01289

R/Dodt, J.; Muller, H.P.; Seemuller, U.; Chang, J.Y.

FEBS Lett. 165, 180-183, 1984

A/Title: The complete amino acid sequence of hirudin, a thrombin specific inhibitor.

A/Reference number: A91318

A/Accession: A91318

A/Molecule type: protein

A/Residues: 1-65 <DOD>

R/Petersen, T.E.; Roberts, H.R.; Sottrup-Jensen, L.; Magnusson, S.; Bagdy, D.

In Proteases of the Biological Fluids, Proc. 23rd Colloq., Peeters, H., ed., pp.145-14

A/Reference number: A94429

A/Accession: A94429

A/Molecule type: protein

A/Residues: 1-65 <P>

R/Mao, S.J.T.; Yates, M.T.; Blankenship, D.T.; Cardin, A.D.; Kristiansky, J.L.; Loven

Anal. Biochem. 161, 514-518, 1987

A/Title: Rapid purification and revised amino-terminal sequence of hirudin: a specific

A/Reference number: A60811; MUID:87211066; PMID:3578808

A/Accession: A60811

A/Molecule type: protein

A/Residues: 1-32, 'N', 34-43 <MAO>

A/Note: the authors suggest that their identification of 33-Asn is correct and that 3

present a natural variant of hirudin

C/Comment: Hirudin is a potent thrombin-specific protease inhibitor.

C/Superfamily: thrombin inhibitor

C/Keywords: anticoagulant; sulfoliprotein

F:6-14,16-28,22-39/Disulfide bonds: #status experimental

F:63/Binding site: sulfate (Tyr) (covalent) #status experimental

Query Match 97.8% Score 360; DB 1; Length 65;

Best Local Similarity 96.9% Pred. No. 7.8e-30;

Matches 63; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 LTYVDCYTESGQNLCLCEGSNNVCGGKNCILGSDGKNCQVCEGTPKQSHNDGFEEIP 60

DB 1 VVYVDCYTESGQNLCLCEGSNNVCGGKNCILGSDGKNCQVCEGTPKQSHNDGFEEIP 60

QY 61 EBYLQ 65

DB 61 EBYLQ 65

RESULT 2

S05674

hirudin IIB - medicinal leech

N/Alternate names: thrombin inhibitor

C/Species: Hirudo medicinalis (medicinal leech)

C>Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 17-Jul-1998
C:Accession: S05674
R:Scharf, M.; Engels, J.; Tripiier, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-thirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S05674
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 95.9%; Score 353; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 4e-29;
Matches 61; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

OY 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
DB 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
OY 61 EYTLQ 65
DB 61 EYTLQ 65

RESULT 3
S78521
hirudin IIRB' - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C:Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
A:Accession: S78521
R:Scharf, M.; Engels, J.; Tripiier, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-thirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S78521
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 95.7%; Score 352; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 5e-29;
Matches 61; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

OY 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
DB 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
OY 61 EYTLQ 65
DB 61 EYTLQ 65

RESULT 4
S05673
hirudin IIA - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C:Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
A:Accession: S05673
R:Scharf, M.; Engels, J.; Tripiier, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-thirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Molecule type: protein
A:Residues: 1-65 <SCH>

C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:47/inhibitory site: lys (thrombin) #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 95.1%; Score 350; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 8e-29;
Matches 61; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

OY 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
DB 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
OY 61 EYTLQ 65
DB 61 EYTLQ 65

RESULT 5
S05676
hirudin III - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C:Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
A:Accession: S05676
R:Scharf, M.; Engels, J.; Tripiier, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-thirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S05676
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 94.6%; Score 348; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 1.3e-28;
Matches 61; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

OY 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
DB 1 LVTTCESGQMLCEGSSNVCGGNKCLTSGDEKNCVTGEGTPKPSHNDGDFEETP 60
OY 61 EYTLQ 65
DB 61 EYTLQ 65

RESULT 6
S05678
hirudin II - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C:Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
A:Accession: S05678
R:Scharf, M.; Engels, J.; Tripiier, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-thirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S05678
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 94.6%; Score 348; DB 2; Length 65;
Best Local Similarity 92.3%; Pred. No. 1.3e-28;
Matches 60; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

QY 1 LVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 IFTYDCTESGODLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
QY 61 EYLIQ 65
|||||
Db 61 EYLIQ 65

RESULT 7
S78520
hirudin IIIa' - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C>Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
C:Accession: S78520
R:Scharf, M.; Engels, J.; Tripler, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-hirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S78520
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 94.0%; Score 346; DB 2; Length 65;
Best Local Similarity 90.8%; Pred. No. 2e-28;
Matches 59; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

QY 1 LVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 VVTYDCTESGDLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
QY 61 EYLIQ 65
|||||
Db 61 EYLIQ 65

RESULT 8
S05677
hirudin IIIB - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C>Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C:Accession: S05677
R:Scharf, M.; Engels, J.; Tripler, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-hirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S05677
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 93.8%; Score 345; DB 2; Length 65;
Best Local Similarity 92.3%; Pred. No. 2.6e-28;
Matches 60; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 LVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 VVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
QY 61 EYLIQ 65
|||||
Db 61 EYLIQ 65

RESULT 9
S05675
hirudin IIIa' - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C>Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C:Accession: S05675
R:Scharf, M.; Engels, J.; Tripler, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-hirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S05675
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 93.8%; Score 345; DB 2; Length 65;
Best Local Similarity 92.3%; Pred. No. 2.6e-28;
Matches 60; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 LVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 VVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
QY 61 EYLIQ 65
|||||
Db 61 EYLIQ 65

RESULT 10
S05679
hirudin II' - medicinal leech
N:Alternate names: thrombin inhibitor
C:Species: Hirudo medicinalis (medicinal leech)
C>Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
C:Accession: S05679
R:Scharf, M.; Engels, J.; Tripler, D.
FEBS Lett. 255, 105-110, 1989
A:Title: Primary structures of new 'iso-hirudins'.
A:Reference number: S05671; MUID:90005945; PMID:2792365
A:Accession: S05679
A:Molecule type: protein
A:Residues: 1-65 <SCH>
C:Superfamily: thrombin inhibitor
C:Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F:6-14,16-28,22-39/Disulfide bonds: #status predicted
F:63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 93.2%; Score 343; DB 2; Length 65;
Best Local Similarity 90.8%; Pred. No. 4.1e-28;
Matches 59; Conservative 6; Mismatches 0; Indels 0; Gaps 0;

QY 1 LVTYDCTESGONCLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 IITYDCTESGDLCEGSNVCGGKNCILGSDGKNCQVTGEGTPKPOSHNDGDFEIP 60

QY 61 EYLIQ 65
|||||
Db 61 EYLIQ 65

RESULT 11
A37417
thrombin inhibitor (hirudin) type II precursor - medicinal leech (fragment)
C:Species: Hirudo medicinalis (medicinal leech)
C>Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 16-Jul-1999
C:Accession: A37417
R:Harvey, R.P.; Degryse, E.; Stefani, L.; Schanber, F.; Cazenave, J.P.; Courtney, M.;
Proc. Natl. Acad. Sci. U.S.A. 83, 1084-1088, 1986

Tue Dec 31 09:05:09 2002

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Search completed: December 30, 2002, 16:18:00
Job time : 18 secs
